

SEQUENCE LISTING

SEQ ID NO : 1

bmaI1:

ATGCGAACTTTCGTTTCATGGCGACGGGCGCCTGCCGAGCGACTTGGCGGCTG
ATCTGGGCCTTTATCGGCACGGAGTTT
CGTCGAGCAGCTCGGCTGGAAACTGCCGTCGGCAAGCGAAGGGTTCGAGCG
GGATCAGTACGATCGCGACGATACCGTCT
ATGTGTTTCGCCCCGCGACGACGACGGGGAAATCTGCGGCTGCGCCCCGGCTGCT
GCCGACGACCCGCCCGTATCTGCTGAAG
GAACTGTTCCCGACGCTGGTCGCGCAAGACATGCCGTTGCCGCAATCCGCCG
CCGTCTGGGAATTGTCGCGCTTCGCCG
GAACGCCGAGGATCCGGCCGGGGGCGGCAACCCGGCCTGGGCGGTGCGGCC
GATGCTCGCCGCCGTCGTCGAGTGCGCCG
CGCGGCTTGGCGCGAAGCAACTGATCGGCGTGACGTTTCTGAGCATGGAGCG
CCTGTTCCGCCGGATCGGCGTGACGCG
CACCGGGCGGGGCCGCGCAGCAGATCGACGGGCGCATGGTCGTCGCGTGCT
GGATCGACCTCGACGCGCAAACGCTCGC
CGCGCTCGATCTCGACCCGCTGCTGTGCGCGCCGCCCGCCGAAGCCGCCTGA

SEQ ID NO :2

bmaI3:

ATGTCATACATCATCGCGGGCCGATTGAACGAACTGCCGCCGCACGTCCAGA
CCGATCTCGGCGCGTATCGCTACGACGT
GTTTCGTGCGCCGGCTCGGCTGGACGATCGCCGGCCACTCGCTCGACGAACAT
GCGGAGTGGGACGAGTTCGACGGGCCGT
CGACGATTCATGTCTGTCGCGCTCGACGACGCGCGAGATCTGCGGCTACGC
ACGCCTGCTGCCGACGACGGGCCCGTAT
CTGCTGCGCGACGTGTTTGCGCATCTGCTCGGCTCGTCGCCCCGCGCCGCAATC
GCCTGCCGTCTGGGAAATGTCGCGCTT
CGCCGCGTCGCGGGCGGCGGAAGCGCGACCGAGCGCGAGCCGCTCGGCAT
GGCGTTCTTTCCGTCGGTGCTCACGGTGG
CCGCGTCGCTCGGCGCGACGCGCGTGGTCGGCGTGATGACGCCATCGATCGA
ACGCCTGTACCGCCGCTCGGGCATCGCG
CTGCATCGCCTCGGCAACGCGATGCCGGGCGCGGGCGGCAGCCTGTCCGCAT
GCTCGATCGATCTGCCGCGCCTCGCGTT
CGCGCCGTTGGGCCTCAAGCAGTGCGCGGCGTGCTGGCGATGCATTGA

SEQ ID NO :3

bmaR1:

ATGGAAGTTCGCTGGCAAGACGCCTATCTTCAATTTAGCGCCGCGGAGAACG
AGCAGCAGCTCTTCCAACAGATCGCCG
GTATACGAAGCGGCTCGGCTTCGAATATTGCTGCTATGGCATAACGCGTGCCGT
TGCCGATCTCGAAGCCGGTTCGTCGCGA

TTTTCGACACCTATCCGAACGGCTGGATGGAGCGCTACCAGGAAATGAACTA
 CCTGGAGGTCGATCCGACCGTACGCGAG
 GGCGCGCTCAGCTCGAACATGATCGTCTGGCCGGAGGCGAGCGCGAGCGAC
 GCGACGACGCTCTGGAGCGACGCGCGCGA
 TCACGGGCTGGCGGTCTGGCGTCGCGCAGTCGAGCTGGGCCTCGCGCGGGGTG
 TTCGGTCTCCTGACGATCGCGCGGCACA
 CGGACCGCCTGACGTCCGCCGAGATCAACCATCTGACGTTGCAGGCGAACTG
 GCTCGCGAACATGTGCGCACTCGCTGATG
 AGCCGTTTTCTCGTGCCGAAGCTCGCGCCCGAATCGGGCGTGGCGCTCACGC
 ACCGCGAGCGGGAGGTGCTGTGCTGGAC
 GGGAGAGGGCAAGACCGCGTGCGAGATCGGGCAGATCCTCAGCATCTCCGA
 GCGCACGGTGAACTTTCACGTCAACAACA
 TCCTCGACAAGCTCGGCGCGACGAACAAGGTGCAGGCCGTCTGTAAGGCGAT
 CGCGATGGGGCTCATCGACGCGCCGTAA

SEQ ID NO :4

bmaR3:

ATGTCATACATCATCGCGGGCCGATTGAACGAACTGCCGCCGCACGTCCAGA
 CCGATCTCGGCGCGTATCGCTACGACGT
 GTTCGTGCGCCGGCTCGGCTGGACGATCGCCGGCCACTCGCTCGACGAACAT
 GCGGAGTGGGACGAGTTCGACGGGCCGT
 CGACGATTCATGTCTGTCGCGCTCGACGACGCGCGCGAGATCTGCGGCTACGC
 ACGCCTGCTGCCGACGACGGGCCCCGTAT
 CTGCTGCGCGACGTGTTTGCGCATCTGCTCGGCTCGTCGCCCCGCGCCGCAATC
 GCCTGCCGTCTGGGAAATGTCGCGCTT
 CGCCGCGTCGCGGGCGGCGGCGAAGCGCGACCGAGCGCGAGCCGCTCGGCAT
 GGCGTTCTTTCCGTCTGGTGCTCACGGTGG
 CCGCGTCGCTCGGCGCGACGCGCGTGGTTCGGCGTGATGACGCCATCGATCGA
 ACGCCTGTACCGCCGCTCGGGCATCGCG
 CTGCATCGCCTCGGCAACGCGATGCCGGGCGCGGGCGGCAGCCTGTCCGCAT
 GCTCGATCGATCTGCCGCGCCTCGCGTT
 CGCGCCGTTGGGCCTCAAGCAGTGCGCGGCGTGCCTGGCGATGCATTGA

SEQ ID NO :5

bmaR4:

ATGCCGTTGCCGATCCGCTGTGGCGAAGGGCCGTGCCCGCAGCAGCGCGGTG
 CGCCGCGTGCGGCCCGTCGCCCCGTCGAG
 AACGCTACGTTCGGCGACGAGACCGGGGGCGCCGCGTGCGCGGACGGTCTTG
 CGGGCATGTCCTGTTTCGATCGTCGGCCG
 ACGCTTGCGTCGTGCGTGTCGAGTCCGCCGACAATCACCCGCAGCGGTCTTC
 AGCGGTCTTTCGGCGCGCGACGCCTGGC
 CCGCCATGCGTACGAGGGCGCATGGCGCAGCATGTTTCGCGGCCTGCCGGGGC
 GGCGTCGAGCGTGCGCGGCGGCAGCCGT
 GATGCAGGTGTGGCCGGCGCGCGCGGGATTTCGAGCGATGCTCGAGCGCCGA
 GCGCCGGTTCGGCTTCGGCGCAGGCGGCC

GATTGTCCCGCCGCGTTCGACGAAACGAACGGCGTGCCGTGCTTCGGCGGCG
CGGCAGGCAAGCTCGCCGGCGTTTCGCC
GCGCGCGGGCCGCGTTCGCCCTCTCGCCCCTTTCGAGCACGCTTCTTCATTG
GTTCGCTAACGTAACTTCCTCACTTGA
GCTGGGCGGTTCTATGTTCTGAAGGCTTGTCATTGGTTCGTTTAACGAAATTC
TGAACGCGACTTGCAAGAAGAGCCTCT
TTGAGCAGACGGCGTATCAC

SEQ ID NO:6

bmaR5:

ATGAGGGCGGCGATGGGGAACTGGGCGGAGGATCTGCTGGCGGGGCTCGAC
AGCGCACGATCCGAGGAAGAGGCGTTTCG
AAGCGTCGAAACCGCGGGCGGCGGCTCGATTTCTGAATACTGCGCATACGGG
CTGCGCGTGCCGTGGCCGCTGTCCAGGC
CGCGCATCGAGACGCGCAGCAACTTTCCCGAGCAATGGAAGCGGCGCTACGT
CGAGGCGGGTTTCCTCGATGTCGATCCG
ATTCTCGCGCACGGCCGCGATCGCAGCAACCGGTCGTCCTCGCCGAGACGC
TGTTTGCGTCCGCGCACCAAGATGTGGGT
CGAGGCGCAGTCGTTCTGGGTTGCGGTTCTGGGCTGGGCGCAGTCGAGCTTCGAC
GCGTATGGCGGCATGGGCATGCTCGCGC
TCGTCCGCTCGCGCGAGCCGGTGACGGCGGGCGGAACTCGACGCGAAGGAGT
ACCGGATGCGCTGGCTCGTGCGCACCGCG
CACGCCGCGCTCGGCCGCGATGATGTTGCCCAAGCTGATGGCGGACCCGGAGC
GCGGGCTGACCGAGCGCGAGGTCGAGGT
GCTCAAGTGGGCGGCGGACGGCAAGACGTCCGGCGAGATCTCGAAGATCCTC
GCGATATCCGTCGATACGGTGAATTTCC
ACGTGAAGAACGCGATCCTGAAGCTCAGGACGGCGAACAAGACGGCGGCGCG
TCGTGCGCGCGGCGATGCTCGGGTTGCTG
AGCTGA

SEQ ID NO:7

bpmI1:

ATGCGAACTTTCGTTTCATGGCGACGGGCGCCTGCCGAGCGACTTGGCGGCTG
ATCTGGGCCTTTATCGGCACGGAGTTT
CGTCGAGCAGCTCGGCTGGAACTGCCGTCGGCAAGCGAAGGGTTCGAGCG
GGATCAGTACGATCGCGACGATAACCGTCT
ATGTGTTCCCGCGACGACGACGGGGAAATCTGCGGCTGCGCCCGGCTGCT
GCCGACGACCCGCCCGTATCTGCTGAAG
GAACTGTTCCCGACGCTGGTCGCGCAAGACATGCCGTTGCCGCAATCCGCCG
CCGTCTGGGAATTGTCGCGCTTCGCCGC
GAACGCCGAGGATCCGGCCGGGGGCGGCAACCCGGCCTGGGCGGTGCGGCC
GATGCTCGCCGCCGTCGTCGAGTGCGCCG
CGCGGCTTGCGCGCAAGCAACTGATCGGCGTGACGTTTCTGAGCATGGAGCG
CCTGTTCCGCCGGATCGGCGTGACGCG
CACCGGGCGGGGCCCGCGCAGCAGATCGACGGGCGCATGGTCGTCGCGTGCT
GGATCGACCTCGACGCGCAAACGCTCGC

CGCGCTCGATCTCGACCCGCTGCTGTGCGCGCCGCCCGCCGAAGCCGCCTGA

SEQ ID NO:8

bpmI2:

ATGATCGATACGACCGTCATAAGCGCCGCGCAACTGGATTCCACCGTCAAGG
CAGCACTCGGCAATTATCGTCGGGCGAT
ATTCATCGAGAACTCGGCTGGCCATTGCCGTTGGTCGACGGGCTCGAGATC
GATCAGTTCGATCGTCCCGATACGATT
ACGTGGTTCGGCAAAACAGAGTCCGGCGATATCTGCGGATGCGCCCGCCTGCT
GCCACGACGAGGCCCTACCTGCTCGGC
GAGGTGTTCCCCGATCTGATGGGCGACGCGGCCGCCCTGCTCGGCGCACG
TGTGGGAAATCTCGCGATTTTCGTCTTC
GATCCTCTCCGGAGGGCCGGACGCGCTGCGGCAGGCTCACCGCAATACGCGC
ATCCTGCTCGCGAAAATCGTCCGCTTTG
CGCAGGCGGCCGGCGTGAAGCGGCTGATCACCGTTTCGCCGCTCGCAGTCGA
GCGGCTGCTCAACCGTCTGAAAGTCCAT
ATTCACCGCGCGGGTCCGCCTCGGTTGATCGACGGCAAGCCGGTGTTCGCGT
GCTGGATCGAGGTGGACGACATCACGCT
CCAAGCGCTCGACATCGAGCCGGCCGCCGATTTCGGCCGCCGGCGCGCTGCGC
CATTCGTGA

SEQ ID NO:9

bpmI3:

ATGTCATACATCATCGCGGGCCGATTGAACGAACTGCCGCCGCACGTCCAGA
CCGATCTCGGCGCGTATCGCTACGACGT
GTTTCGTGCGCCGGCTCGGCTGGACGATCGCCGGCCACTCGCTCGACGAACAT
GCGGAGTGGGACGAGTTCGACGGGCCGT
CGACGATTCATGTCTGTCGCGCTCGACGACGCGCGAGATCTGCGGCTACGC
ACGCCTGCTGCCGACGACGGGCCCGTAT
CTGCTGCGCGACGTGTTTGCGCATCTGCTCGGCTCGTCGCCCGCGCCGCAATC
GCCTGCCGTCTGGGAAATGTCGCGCTT
CGCCGCGTCGCGGCGGCGGCGAAGCGCGACCGAGCGCGAGCCGCTCGGCAT
GGCGTTCTTTCCGTCGGTGCTCACGGTGG
CCGCGTCGCTCGGCGCGACGCGCGTGGTCGGCGTGATGACGCCATCGATCGA
ACGCCTGTACCGCCGCTCGGGCATCGCG
CTGCATCGCCTCGGCAACGCGATGCCGGGCGCGGGCGGCAGCCTGTCCGCAT
GCTCGATCGATCTGCCGCGCCTCGCGTT
CGCGCCGTTGGGCCGCAAGCAGTGC GCGGCGTGCCTGGCGATGCATTGA

SEQ ID NO:10

bpmR1:

ATGGAAGTGCCTGGCAAGACGCCTATCTTCAATTTAGCGCCGCGGAGAACG
AGCAGCAGCTCTTCCAACAGATCGCCG
GTATACGAAGCGGCTCGGCTTCGAATATTGCTGCTATGGCATAACGCGTGCCGT
TGCCGATCTCGAAGCCGGTCTGTCGCGA

TTTTCGACACCTATCCGAACGGCTGGATGGAGCGCTACCAGGAAATGAACTA
CCTGGAGGTCGATCCGACCGTACGCGAG
GGCGCGCTCAGCTCGAACATGATCGTCTGGCCGGAGGCGAGCGCGAGCGAC
GCGACGACGCTCTGGAGCGACGCGCGCGA
TCACGGGCTGGCGGTCTGGCGTCGCGCAGTCGAGCTGGGCCTCGCGCGGGGTG
TTCGGTCTCCTGACGATCGCGCGGCACA
CCGACCGCCTGACGTCCGCCGAGATCAACCATCTGACGTTGCAGGCGAACTG
GCTCGCGAACATGTCGCACTCGCTGATG
AGCCGTTTTCTCGTGCCGAAGCTCGCGCCCGAATCGGGCGTGGCGCTCACGC
ACCGCGAGCGGGAGGTGCTGTGCTGGAC
GGGGGAGGGCAAGACCGCGTGCAGATCGGGCAGATCCTCAGCATCTCCGA
GCGCACGGTGAACTTTCAGTCAACAACA
TCCTCGACAAGCTCGGCGCGACGAACAAGGTGCAGGCCGTCTGTAAGGCGAT
CGCGATGGGGCTCATCGACGCGCCGTAA

SEQ ID NO:11

bpmR2:

ATGGAGATGCACGACTTTCTTCAATTTTGGCTAAACGAATTTTCACGCAGTGA
GAACCCACAGCACGTCAATTTCCGTCTT
GACCCGCGCGGCCGCGACGCTCGGCTACGAATACGCCGCCTACGGCATGCGC
CGCCCCTTTCCGATCAGCAATCCGCCGA
TCCTCATGGTGTCCAATATCCCGCCCGATGGCAGGAACGCTATATCGAAGC
GCGATTTCGCGAACATCGACGGCGCGGTG
AAGGCCGCGCTCGGCAGCGACCGGCCCGTGACCTGGAGCGCGCCCGCCAAC
GCATCGAAAAGCGCATTCTGGGCGGAGGC
GCTGTCTGTTCCGGCATCGCCACGGCTGGTCTCGCGTCGCGGGGCGCGGAC
GGCGCGATCGGCGTGCTGACGCTGTCGA
GAACGCAGGACCCGATCGACACCGCGGAGAAGTTTCGCAACGAGAGCATCG
TGCACTGGCTCGCCAATGTCGCTCATGCG
TCGATGGCGCCGTTCTTGCCCGCCGCGACGAGTTCGATCCGGACCTCACGC
GCCGCGAGACCGATGTGCTGAAATGGAC
GGCCGACGGAAAGACAGCGTACGAAATCGCGCTGATTCTCAGCATCTCGGAG
AGCACCGTCAATTTTCAGTGAAGAATA
TCGTCTCCAAGCTGGGCTCCACGAACAAGATACAGGCCGTGGCCAAGGCCGC
GCTGATGGGGATGCTGTGA

SEQ ID NO:12

bpmR3:

ATGCTCTCCGCCGCGTTGCCGGAATCGCGCGACGTCCGCACGCTGGTCGAGA
CTTTCAGGCAGGCGGCGCTGCAGATCGG
CTACCAGCACCATGCGATCGTCGAGCTGTCGGGCGCATCGCATCCGGCGTCTG
ATCGACGTCGTCTCGCTGCACTATCCGT
CCGAGTGGGTCGAGCACTACACCCGCAACGACTACTTCGCGATCGATCCCGT
CCATCGCGCGGCATTCCGCTACAGCACG

CCGTTCTCGTGGAACGACGTCGCGACGGCGAACCTGCGCGAGCGGCATCTGC
TGATGGAAGCCGAGGACGCGGGCCTCGA
CAACGGCATCAGCATCCCGCTGCATCAGCCGCTCGGACGCGTGCTGCTGGTG
AGCCTGTCCGGCACCGCGCCGACGCACG
ATGCCGATGCGAAATGGCGCAACGCGTACCTGCTCGGCATGCAGTTCAATCT
GCAGTTCAGAGCATGCGCACGTGCCCG
CCGATTCCGCCGTCCGTCCACCTGACGGATCGCGAACAGATGTGCCTCACGT
GGGTCGCGCGCGGCAAGTCGTCGTGGGT
CATCGCGAACATGCTCGACATCTCCAAATACACGGTCGACTTCCACATCGAG
AACGCGATGGAGAAGCTCAACACGCGCA
GCCGCACGTTGCGCGCCGTGAAGGCGACGCGGCAGGGGCTCATCTTTCCATG
A

SEQ ID NO:13

bpmR4:

ATGGCGCGAACGCGCCGAGGGGCAAGCGAATCGCGCCGACGCGCGCGCGCC
GGCGCGATAGCCGCGCGACCTGCGTTCCG
CGCCCGCCGCACAGGCGGGTCGCCGCGCGGTCGCGCGCAACCGCTTGCGCGC
GGCGGCGGCGCGCGCTCAGATCAACCCG
CGCGCCGATGCGATGACGACCGCCTGCGCGCGGTTGTTGCGCGCCTATCTTGC
GTGCGGCGTTGACAGATGAAACACGAC
CGTGCGCTCCGAGATGCCGAGAATCTTCGAGATTTCCACGCCGTCTTGCCGC
GCCCCGCCCACTGCAGCGATTGCGCGT
CGCGCGCGGTCAGATCGCACGAGCCCTGCCGTCTGAGCCGGCAATCGAGCAG
CTCGTGATCGCCGCGTGACGAAGCTC
GCGAGCAACTGCGACAGGCTCAGCAGCCGCAGTATGTCGCTCGCGTCGTGCT
CGAACGGATCGTCGGTCGCCATGCTGAG
CATGCTGATCGCGCCGCTGCGATCGTGAACGGGGCAACTGAGCCCGTAGACG
AGGCCGTACGATTTGCGCTCGTCGCGCA
TGAGCTTCGCGCGGCTGGTCGTATAGAGGTCGTCGTGCCAGATGAGCGGCAC
GGTCCGGCACCGGCAATGCTGAACGACG
GGATCGATCGACAGGTAGTCGGCGGCGTCGTAGCGCAGCCGCCACTCGGCCG
GAAATCCGTCGAGCATGCAGCGGCTCGA
CGCCGCGCCGGAGATCTGATGCCGGTACGCGAAATTCTTGAAGCCCAGTTGG
CGAACGTGATACGCCGTCTGCTCAAAGA
GGCTCTTCTTGCAAGTCGCGTTTCAGAATTTGTTAAACGAACCAATGGACAA
GCCTTCGAACATAGAACCGCCCAGCTCA
AGTGA

SEQ ID NO:14

bpmR5:

ATGAGGGCGGCGATGGGGAACTGGGCGGAGGATCTGCTGGCGGGGCTCGAC
AGCGCACGATCCGAGGAAGAGGCGTTTCG
AAGCGTCGAAACCGCGGCGGCGGCTCGATTTCAATACTGCGCATACGGG
CTGCGCGTGCCGTGGCCGCTGTCCAGGC

CGCGCATCGAGACGCGCAGCAACTTTCCCGAGCAATGGAAGCGGCGCTACGT
 CGAGGCGGGTTTCCTCGACGTCGATCCG
 ATTCTCGCGCACGGCCGCGGATCGCAGCAACCGGTCGTCCTCGCCGAGACGC
 TGTTTGCGTCCGCGCACCAAGATGTGGGT
 CGAGGCGCAGTCGTTCTGGGTTGCGGTTCTGGCTGGGCGCAGTCGAGCTTCGAC
 GCGTATGGCGGCATGGGCATGCTCGCGC
 TCGTCCGCTCGTGCGAGCCGGTGACGGCGGCGGAACCTCGACGCGAAGGAGTA
 CCGGATGCGCTGGCTCGTGCGCACCGCG
 CACGCCGCGCTCGGCCGCATGATGTTGCCCAAGCTGATGGCGGACCCGGAGC
 GCGGGCTGACCGAGCGCGAGGTCGAGGT
 GCTCAAGTGGGCGGCGGACGGCAAGACGTCCGGCGAGATCTCGAAGATCCTC
 GCGATATCCGTCGATACGGTGAATTTCC
 ACGTGAAGAACGCGATCCTGAAGCTCAGGACGGCGAACAAGACGGCGGCCG
 TCGTGCGCGCGGCGATGCTCGGGTTGCTG
 AGCTGA

SEQ ID NO:15

bmaI1:

MRTFVHGDGRLPSDLAADLGLYRHGVFVEQLGWKLPSASEGFERDQYDRDDTV
 YVFARDDDDGEICGCARLLPTTRPYLLK
 ELFPTLVAQDMPLPQSAAVWELSRFAANAEDPAGGGNPAWAVRPMLAAVVEC
 AARLGAKQLIGVTFLSMERLFRRIGVHA
 HRAGPAQQIDGRMVVACWIDLDAQTLAALDLDPLLCAPPAEAA

SEQ ID NO:16

bmaI3:

MSYIIAGRLNELPPHVQTDLGAYRYDVFVRRLGWTIAGHSLDEHAEWDEFDGPS
 TIHVVALDDAREICGYARLLPTTGPY
 LLRDVFAHLLGSSPAPQSPAVWEMSRFAASRRRRSATEREPLGMAFFPSVLTVA
 ASLGATRUVGVMTPSIERLYRRSGIA
 LHRLGNAMPGAGGSLSACSIDLPRLAFAPLGLKQCAACLAMH

SEQ ID NO:17

bmaR1:

MELRWQDAYLQFSAAENEQQLFQQIAAYTKRLGFEYCCYGIRVPLPISKPVVAIF
 DTYPNGWMERYQEMNYLEVDPVRE
 GALSSNMIVWPEASASDATTWSDARDHGLAVGVAQSSWASRGVFGLLTIA RH
 TDRLTSAEINHLTLQANWLANMSHSLM
 SRFLVPKLAPESGVALTHREREVL CWTGEGKTACEIGQILSISERTVNFHVNNILD
 KLGATNKVQAVVKAIAMGLIDAP

SEQ ID NO:18

bmaR3:

MSYIIAGRLNELPPHVQTDLGAYRYDVFVRRLGWTIAGHSLDEHAEWDEFDGPS
 TIHVVALDDAREICGYARLLPTTGPY

LLRDVFAHLLGSSPAPQSPAVWEMSRFAASRRRRSATEREPLGMAFFPSVLTVA
 ASLGATRVVGVMTPSIERLYRRSGIA
 LHRLGNAMPGAGGSLSACSIDLPRLAFAPLGLKQCAACLAMH

SEQ ID NO:19

bmaR4:

MPLPIRCGEGPSPQQRGAPRAARRPSRTLRSATRPGAPRARTVLRACPVRSSADA
 CVVRVESADNHPQRSSAVFRRATPG
 PPCVRGRMAQHVRGLPGRRRACAAAAMQVWPARAGFERC SSAERRFGFGAG
 GRLSRRVRRNERRAVLRRRGRQARRRFA
 ARGPPLPSRPFRARFLHWFANVTSSLELGGSMEGLSIGSFNEILNATCKKSLFEQ
 TAYH

SEQ ID NO:20

bmaR5:

MRAAMGNWAEDLLAGLDSARSEEEAFRSVETAAAALDFEY CAYGLRVPWPLSR
 PRIETRSNFPEQWKRRYVEAGFLDVDP
 ILAHGRRSQQPVVLAETLFASAHQM WVEAQSFGLRFGWAQSSFDAYGGMGML
 ALVRSREPVTAAELDAKEYRMRWLVRTA
 HAALGRMMLPKLMADPERGLTEREVEVLKWAADGKTSGEISKIL AISVDTVNFH
 VKNAILKLRTANKTAAVVRAAMLGLLS

SEQ ID NO:21

bpmI1:

MRTFVHGDGRLPSDLAADLGLYRHGVFVEQLGWKLPSASEGFERDQYDRDDTV
 YVFARDDDGEICGCARLLPTTRPYLLK
 ELFPTLVAQDMPLPQSAAVWELSRFAANAEDPAGGGNPAWAVRPMLAAVVEC
 AARLGAKQLIGVTFLSMERLFRRIGVHA
 HRAGPAQQIDGRMVVACWIDLDAQTLAALDLDPLLCAAPAEAA

SEQ ID NO:22

bpmI2:

MIDTTVISAAQLDSTVKAALGNYRRAIFIEKLGWPLPLVDGLEIDQFDRPDTIYVV
 GKTESGDICGCARLLPTTRPYLLG
 EVFPDLMGDAAPPCSAHVWEISRFSSSILSGGPDALRQAHRNTRILLAKIVRFAQA
 AGVKRLITVSPLAVERLLNRLKVH
 IHRAGPPRLIDGKPVFACWIEVDDITLQALDIEPAADSAAGALRHS

SEQ ID NO:23

bpmI3:

MSYIIAGRLNELPPHVQTDLGAYRYDV FVRRLGWTIAGHSLDEHAEWDEFDGP
 TIHVVALDDAREICGYARLLPTTGPY
 LLRDVFAHLLGSSPAPQSPAVWEMSRFAASRRRRSATEREPLGMAFFPSVLTVA
 ASLGATRVVGVMTPSIERLYRRSGIA
 LHRLGNAMPGAGGSLSACSIDLPRLAFAPLGRKQCAACLAMH

SEQ ID NO:24

bpmR1:

MELRWQDAYLQFSAAENEQQLFQQIAAYTKRLGFEYCCYGIRVPLPISKPVVAIF
DTYPNGWMERYQEMNYLEVDPVRE
GALSSNMIVWPEASASDATTLSWDARDHGLAVGVAQSSWASRGVFGLLTIARH
TDRLTSAEINHLTLQANWLANMSHSLM
SRFLVPKLAPESGVALTHREREVLCTWTGEGKTACEIGQILSISERTVNFHVNNILD
KLGATNKVQAVVKAIAMGLIDAP

SEQ ID NO:25

bpmR2:

MEMHDFLQFWLNEFSRSENQHVISVLTRAAATLGYEYAAAYGMRRPFPISNPPIL
MVSNPYPARWQERYIEARFANIDGAV
KAALGSDRPVTWSAPANASKSAFWAEALSFGIAHGWSSASRGADGAIGVLTLSR
TQDPIDTAEKFRNESIVHWLANVAHA
SMAPFLPAADEFPDLTRRETDLKWTADGKTAYEIALILSISESTVNFHVKNIVS
KLGSTNKIQAVAKAALMGML

SEQ ID NO:26

bpmR3:

MLSAALPESRDVRTLVETFRQAALQIGYQHHAIVELSGASHPASIDVVS LHYPSE
WVEHYTRNDYFAIDPVHRAAFRYST
PFSWNDVATANLRERHLLMEAEDAGLDNGISIP LHQPLGRVLLVSLSGTAPTHDA
DAKWRNAYLLGMQFNLQFQSMRTCR
PIPPSVHLTDREQMCLTWVARGKSSWVIANMLDISKYTVDFHIENAMEKLNTRS
RTFAAVKATRQGLIFP

SEQ ID NO:27

bpmR4:

MARTRRGASESRRSARAGAIAARPAFRARRTGGSPRGRAQPLARGGGARSQPA
RRCDDRLRAVVRAYLACGVRQMKHD
RALRDAENLRDFPRRLAAPRPLQRFALARGQIARALPSEPAIEQLVHRRVHEARE
QLRQAQQPQYVARVVLERIVGRHAE
HADRAAAIVNGATEPVDEAVRFRLVAHELRAAGRIEVVVPDERHGPAPAMLND
GIDRQVVGGVVAQPPLGRKSVEHAAAR
RRAGDLMPVREILEAQLANVIRLLKEALLASRVQNFVKRTNGQAFEHRTAQLK

SEQ ID NO:28

bpmR5:

MRAAMGNWAEDLLAGLDSARSEEEAFRSVETAAAALDFEYCAYGRLVPWPLSR
PRIETRSNFPQWKRRYVEAGFLDVPD
ILAHGRRSQPVVLAETLFASAHQMWVEAQSFGLRFGWAQSSFDAYGGMGML
ALVRSCEPVTAAELDAKEYRMRWLVRTA
HAALGRMMLPKLMADPERGLTEREVEVLKWAADGKTSGEISKILAISVDTVNFH
VKNAILKLRTANKTAAVVRAAMLGLLS.

SEQ ID NO:29

F 5'-CCGCGACGACGACGGGGAAATC-3'

SEQ ID NO:30

R 5'-TCGATCCAGCACGCGACGACCAT-3'

SEQ ID NO:31

F 5'-ATAAGCGCCGCGCAACTGGATTCC-3'

SEQ ID NO:32

R 5'-CAGGATCGCCGTATTGCGGTGAGC-3'

SEQ ID NO:33

F 5'-TCGCGGGCCGATTGAACGAACTGC-3'

SEQ ID NO:34

R 5'-GAGCGACGCGGCCACCGTGAGCAC-3'

SEQ ID NO:35

F 5'-CGGCTTCGAATATTGCTGCTATGG-3'

SEQ ID NO:36

R 5'-GAGAAAACGGCTCATCAGCGAGTG-3'

SEQ ID NO:37

F 5'-AGCGACCGGCCCCGTGACCTGGAG-3'

SEQ ID NO:38

R 5'-CGGCCTGTATCTTGTTTCGTGGAG-3'

SEQ ID NO:39

F 5'-AGACGTCGTCTCGCTGCACTATCC-3'

SEQ ID NO:40

R 5'-ACCCACGTGAGGCACATCTGTTCG-3'

SEQ ID NO:41

F 5'-GGCGTTCGACAGATGAAACACGAC-3'

SEQ ID NO:42

R 5'-GCTCATCTGGCACGACGACCTCTA-3'

SEQ ID NO:43

F 5'-CGCGTGCCGTGGCCGCTGTCCA-3'

SEQ ID NO:44

R 5'-CCGCGCTCCGGGTCCGCCATCAG-3'